3. (Twice Amended) The flow-through device of Claim 1, [57,] 58 or 59 in which said porous substrate has an average pore size of about 1 μm to about 250 μm.

4. (Twice Amended) The flow-through device of Claim [1, 57,] 58, 59 or 60 in which said porous substrate has immobilized thereon about 2×10^{-19} to 2×10^{-15} nmol/nm^2 of said capture polynucleotide.

8. (Twice Amended) The flow-through device of Claim 1, [57,] 58, 59 or 60 in which said capture polynucleotide is covalently attached to the porous substrate *via* a linker.

9. (Twice Amended) The flow-through device of Claim 1, [57,] 59 or 60 in which said porous substrate is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

10. (Thrice Amended) The flow-through device of Claim 1, [57,] 58, 59 or 60 in which said porous substrate is composed of high density or ultra-high molecular weight polyethylene.

11. (Twice Amended) The flow-through device of Claim 1, [57,] 58 or 60 in which said porous substrate has a void volume in the range of about 1 μl/cm^2 to about 100 μl/cm^2.

13. (Twice Amended) The flow-through device of Claim 1, [57,] 58 or 59 in which the porous substrate has a porosity in the range of about 25 to 80%.

14. (Twice Amended) The flow-through device of Claim 1, [57,] 58, 59 or 60 in which the capture polynucleotide is covalently immobilized on the porous substrate via its 5'- or 3'-terminal residue.

21. (Twice Amended) The flow-through device according to Claim 1, [57,] 58, 59 or 60 further comprising a housing in which the three-dimensional porous substrate is disposed.

24. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 in which said target nucleic acid is applied to said flow-through device under conditions of high stringency.

25. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 in which said target nucleic acid is applied to said flow-through device under conditions of low stringency.

26. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 in which said target nucleic acid is applied to the flow-through device under conditions wherein it hybridizes with said capture polynucleotide in less than one minute.

27. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 in which said porous substrate of said flow-through device has an average pore size of about 1 μm to about 250 μm.

28. (Twice Amended) The method of Claim [23, 61,] 62, 63 or 64 in which the density or surface concentration of said capture polynucleotide is about 2×10^{-19} to 2×10^{-15} nmol/nm^2.

32. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 in which said capture polynucleotide is covalently attached to the porous substrate of the flow-through device *via* a linker.

33. (Twice Amended) The method of Claim 23, [61,] 63 or 64 in which said porous substrate of said flow-through device is composed of glass or a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

34. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 in which said porous substrate of said flow-through device is composed of high density or ultra-high molecular weight polyethylene.

35. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 in which said porous substrate of said flow-through device has a void volume in the range of 0.1 $\mu l/cm^2$ to about 100 $\mu l/cm^2$.

36. (Twice Amended) The method of Claim 23, [61,] 62, 63 or 64 which further includes the step of washing said hybridized complex under conditions of moderate or high stringency.

✓40. (Twice Amended) A method of determining whether a sample contains a target nucleic acid, said method comprising the steps of:

(a) flowing a sample suspected of containing a target nucleic acid through a flow-through device according to Claim 1, [57,] 58, 59 or 60 under conditions wherein the target nucleic acid and capture polynucleotide hybridize; and

(b) detecting the presence of hybrids, wherein a positive detection indicates the presence of the target nucleic acid in the sample.

44. (Twice Amended) A kit for capturing a target nucleic acid of interest from a sample, comprising:

a) a flow-through device according to Claim 1, [57,] 58, 59 or 60; and

b) a housing into which the flow-through device can be disposed.

50. (Twice Amended) A kit for capturing a target nucleic acid from a sample comprising:

a) a three-dimensional porous substrate having an average pore size of about [1 μm to about 250 μm] 10 μm to about 100 μm and a porosity in the range of 25% to 80%; and

b) a capture polynucleotide capable of being covalently attached to the porous substrate.

52. (Twice Amended) A kit for capturing a target nucleic acid from a sample comprising:

a) a three-dimensional porous substrate having an average pore size of about [1 µm to about 250 µm] 10 µm to about 100 µm and a porosity in the range of 25% to 80%; and

b) means for generating a capture polynucleotide which is capable of hybridizing to the target nucleic acid and which is capable of being covalently attached to the porous substrate.

58. (Amended) A flow-through device for capturing a target nucleic acid comprising a three-dimensional porous substrate having immobilized thereon a capture polynucleotide which is capable of hybridizing to the target nucleic acid, and wherein said porous substrate is composed of [glass or] a polymeric material selected from the group consisting of polyethylene, polystyrene, polycarbonate and polypropylene.

59. (Amended) A flow-through device for capturing a target nucleic acid, comprising a three-dimensional porous substrate having substantially irreversibly immobilized thereon a capture polynucleotide which is capable of hybridizing to the target nucleic acid, and wherein said porous substrate, prior to immobilization of the capture polynucleotide, is activated by plasma activation [has a void volume in the range of about 1 µl/cm^2 to about 100 µl/cm^2].

60. (Amended) A flow-through device for capturing a target nucleic acid, comprising a three-dimensional porous substrate having an average pore size of about [1 µm to about 250 µm] 10 µm to about 100 µm and a porosity in the range of about 25 to 80% and having immobilized thereon a capture polynucleotide capable of hybridizing to the target nucleic acid.